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## B. In the Claims

Please cancel claims 8 and 34 without prejudice. Please amend claims 1, 4, 9 and 10 and add new claim 35, as indicated. Upon entry of the amendment, the status of the claims will be as follows:

- 1. (Currently amended) A method of producing full-length coding sequences, said method comprising:
  - (a) synthesizing first strand cDNA using isolated full-length mRNA from a population of cells as a template, thereby forming first strand cDNA/mRNA hybrid(s);
    - (b) denaturing the first strand cDNA/mRNA hybrid(s);
  - (c) attaching a non-native tag sequence <u>comprising a recognition site for a site-specific recombinase</u> to the 3' end of the first strand cDNA; and
  - (d) producing a full-length double-stranded cDNA by synthesizing second strand cDNA using the tagged first strand cDNA produced in step (c).
- 2. (Original) A method according to claim 1 wherein the mRNA is isolated employing an affinity purification material.
- 3. (Original) A method according to claim 2 wherein the affinity purification material comprises one or more cap-binding proteins bound to a solid surface.
- 4. (Currently amended) A method according to claim 3 wherein the cap-binding protein(s) are selected from the group consisting of <u>eukaryotic initiation factor (EIF) 4E eIF4E</u>, eIF4F, eIF4G, <u>nuclear cap binding protein nCBP</u>, and eIF4E:eIF4G fusion protein.

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5. (Original) A method according to claim 2 wherein the mRNA to be isolated comprises a biotinylated cap structure.

6. (Original) A method according to claim 5 wherein the affinity purification material is a streptavidin or avidin-complexed solid support.

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- 7. (Original) A method according to claim 1 wherein the mRNA is de-capped and dephosphorylated after isolation.
  - 8. (Canceled)
- 9. (Currently amended) A method according to <u>claim 1</u> <u>claim 8</u> wherein the tag sequence further comprises a recognition site for a site-specific restriction endonuclease.
- 10. (Currently amended) A method according to claim 1 wherein the tag sequence is attached by a site-specific recombinase capable of recognizing and acting which recognizes and acts on single stranded DNA.
- 11. (Original) A method according to claim 10 wherein the site-specific recombinase is *E. coli* topoisomerase III.
- 12. (Original) A method according to claim 1 further comprising amplifying the cDNA during or after step (d).
- 13. (Original) A method according to claim 12 further comprising inserting the amplified cDNA into an expression vector.

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14. (Original) A method according to claim 1 further comprising treating the first strand cDNA/mRNA hybrid(s) formed in step (a) with a substance that degrades single stranded RNA; and isolating the undegraded hybrid(s) with an affinity purification material having affinity for capped mRNA prior to performing step (b).

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- 15. (Original) A method according to claim 14 wherein the substance is RNAse I.
- 16. (Original) A method according to claim 14 wherein the affinity purification material comprises one or more cap-binding proteins bound to a solid support.
- 17. (Original) A method according to claim 14 wherein the mRNA component of the cDNA/mRNA hybrid comprises a biotinylated cap structure.
- 18. (Original) A method according to claim 17 wherein the affinity purification material is a streptavidin or avidin-complexed solid support.
- 19. (Original) A method according to claim 14 further comprising inserting the double stranded cDNA resulting from step (d) into an expression vector.
- 20. (Original) An isolated full-length coding sequence prepared according to the method of claim 1.
- 21. (Original) An expression vector comprising an isolated full-length coding sequence prepared according to the method of claim 1.

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22. (Original) An expression vector according to claim 21 comprising one or more elements selected from: a promoter-enhancer, a selection marker encoding sequence, an origin of replication, an epitope-tag encoding sequence or an affinity purification-tag encoding sequence.

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- 23. (Original) An expression vector according to claim 22 wherein the promoterenhancer is the T7 promoter, gal1 promoter, metallothionein promoter, AraC promoter, or CMV promoter-enhancer.
- 24. (Original) An expression vector according to claim 22 wherein the selection marker encoding sequence encodes a protein which imparts antibiotic resistance to cells.
- 25. (Original) An expression vector according to claim 22 wherein the epitope-tag sequence encodes V5, the peptide Phe-His-His-Thr-Thr (SEQ ID NO:2), hemaglutinin, or glutathione-S-transferase.
- 26. (Original) An expression vector according to claim 22 wherein the affinity purification-tag sequence encodes a polyamino acid tag or a polypeptide.
- 27. (Original) An expression vector according to claim 26 wherein said polyamino acid tag is polyhistidine.
- 28. (Original) An expression vector according to claim 26 wherein said polypeptide is a chitin binding domain or glutathione-S-transferase.
- 29. (Original) An expression vector according to claim 26 wherein said polypeptide encoding sequence includes an intern encoding sequence.

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- 30. (Original) An expression vector according to claim 21 wherein the expression vector is a eukaryotic expression vector or a prokaryotic expression vector.
- 31. (Original) An expression vector according to claim 30 wherein the eukaryotic expression vector is pYES2, pMT, pIND, or pcDNA3.1.
  - 32. (Original) A method of obtaining full-length coding sequences comprising:
  - (a) contacting full-length mRNA, isolated from a population of cells by employing an affinity purification material, with reverse transcriptase and thereby synthesizing first strand cDNA and forming first strand cDNA/mRNA hybrids;
  - (b) treating the first strand cDNA/mRNA hybrids with a substance that degrades single stranded RNA;
  - (c) isolating undegraded hybrid(s) from degraded hybrids employing an affinity purification material having affinity for capped mRNA;
  - (d) denaturing the isolated cDNA/mRNA hybrids obtained from step (c) thereby producing single stranded cDNA and single stranded mRNA;
  - (e) attaching a non-native tag sequence to the single-stranded cDNA, wherein the tag sequence comprises a site-specific recombination sequence and is attached by *E. coli* topoisomerase III; and
  - (f) synthesizing second strand cDNA using the tagged cDNA as a template and/or amplifying the cDNA, wherein the amplification primers comprise an anti-coding sequence of the tag sequence (5') and oligo-dT (3').
- 33. (Original) A method according to claim 32 further comprising inserting the cDNA obtained in step (f) into and expression vector.

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34. (Canceled)

35. (New) A method according to claim 10 wherein the site-specific recombinase is a type I topoisomerase.

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